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Version 1.0 Health and Wellbeing Services

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This ~~UHSRW~~ contains a selection of information relating to the resident population of Herefordshire. Commentary boxes are included under some of the tables to highlight key points.

Unless otherwise stated, the source of these statistics is the Compendium of Clinical Health Indicators updated in December 2010. The data from this source generally concerns events over the period 2007-2009. Other statistics from this source can be obtained from the Director of Public Health's office.

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Abbreviations used in the tables

- E&W England & Wales
- WMR West Midlands Region
- ICD-10 International Classification of Diseases, tenth revision – see "technical notes" on next page
- 95% CI 95% confidence interval. Confidence intervals assess the level of uncertainty caused by chance variation. Rates based on small numbers of observations (events) have wider confidence intervals than rates based on larger numbers of observations. Essentially, the 95% CI shows the range of values within which we are 95% certain that the true rate would lie if we were basing the calculated rate upon observations from an infinitely large sized population. If the local area's confidence intervals do not overlap with the national rate, it is likely that their indicator value is genuinely different from the national rate. (see also "technical notes" on next page.)
- LL-UL Lower limit/upper limit (of a confidence interval range)

Technical Notes

- International Classification of Diseases: from January 2001 information on cause of death has been coded to IDC10, the tenth revision of this classification system. Standardised mortality ratios, directly age-standardised rates and years of life lost are usually presented as the pooled average of the last three years for which data are available. In this report these are the years 2007, 2008 and 2009.
- Age-standardised rates: age standardisation facilitates comparisons between different geographical areas by controlling for differences in the age structure of the populations. A standardised rate is calculated either by applying the age-specific death rates for the population of interest to a standard population model (direct standardisation) or by applying the age-specific death rates for a standard

population to the population structure of interest (indirect standardisation). In all statistics from the National Centre for Health Outcomes Development website, directly age-standardised rates are standardised to the European Standard population; while for indirectly standardised rates (standardised mortality ratios or SMRs), the reference population is that of England & Wales.

- Standardised Mortality Ratio (SMR): the ratio of the actual number of deaths in an area to the “expected” number of deaths if the age-standardised mortality rates for England & Wales were applied to the area’s population, multiplied by 100. Therefore, the SMR for England & Wales as a whole is 100: higher figures indicate higher mortality and lower figures indicate lower mortality than England & Wales as a whole.
- Use of confidence intervals around population-based rates: most health professionals are aware that estimates based on a random sample of a population are subject to error due to sampling variability, and that confidence intervals can be used to describe the uncertainty in an estimate derived from a sample. However, we have sometimes been asked why confidence intervals are also used around population-based rates, such as death rates, because these are based on actual counts relating to the whole population (and not on samples of the population). This is because rates and percentages based on a full population count can also be considered as estimates subject to error. For example, a rate observed in a single year can be considered as a sample or estimate of a true or underlying rate. Random error may be particularly important when the rate or percentage is based on a small number of events in the numerator. The larger the numerator, the better the observed rate will estimate the underlying rate. Obviously, the rate observed in any one year does describe what actually happened in that year, but there is a danger of misinterpreting comparisons or trends. We would want to try to base health policy decisions on the underlying rate, rather than on annual rates which may be subject to random fluctuation, and the use of confidence intervals can help us to interpret when changes or differences in rates are meaningful.
- Use of “comparator authorities”: we have included a comparison with **PCTs** of a similar socio-economic profile to Herefordshire, as well as a comparison with the West Midlands Region and England. To assess similarity of authorities the Squared Euclidean Distance (SED) is used as a means of comparison. It is based on six main census dimensions: demographic, household composition, housing, socio-economic, employment and industry sector. Two local authorities are said to be similar if the “distance” between them based on these Census characteristics is small. Two local authority areas are considered to be:
 - **Extremely similar** if the SED is less than 2.66646 ie within 1% of the total range.
 - **Very similar** if they have an SED of less than 2.5% of the range.
 - **Similar** if they have an SED of less than 5% of the range.
 - **Somewhat similar** if they have an SED of less than 10% of the range.
 - **Not similar** if they are more than 10% of the total range apart.

Using these definitions, the PCTs which are currently most similar to Herefordshire are Shropshire County (SED of 0.54); Somerset (SED 0.87), Lincolnshire Teaching (SED 1.28) and East Riding of Yorkshire (SED 1.55). An average was calculated from the health data from these four areas and is shown in the “comparator PCTs” column where possible.

DEMOGRAPHY

**Table 1: Resident population of Herefordshire, 2009 mid-year estimate:
published June 2010**

Age Group	Males	Females	Persons	% Population	WMR (%)	E&W (%)
0-4	4759	4244	9003	5.0	6.3	6.1
5-14	10130	9681	19811	11.1	11.8	11.4
15-24	9877	9263	19140	10.7	13.5	13.3
25-44	19793	20204	39997	22.3	26.3	27.6
45-64	25755	26664	52419	29.3	25.2	25.3
65-74	9808	10361	20169	11.3	9.0	8.5
75-84	5829	7377	13206	7.4	5.7	5.6
85+	1730	3647	5377	3.0	2.2	2.3
All ages	87681	91441	179122	100	100	100
WMR	2671088	2759991	5431079			
E&W	26980113	27828947	54809060			

Figure 1: Age structure of Herefordshire population, 2009 mid-year estimate

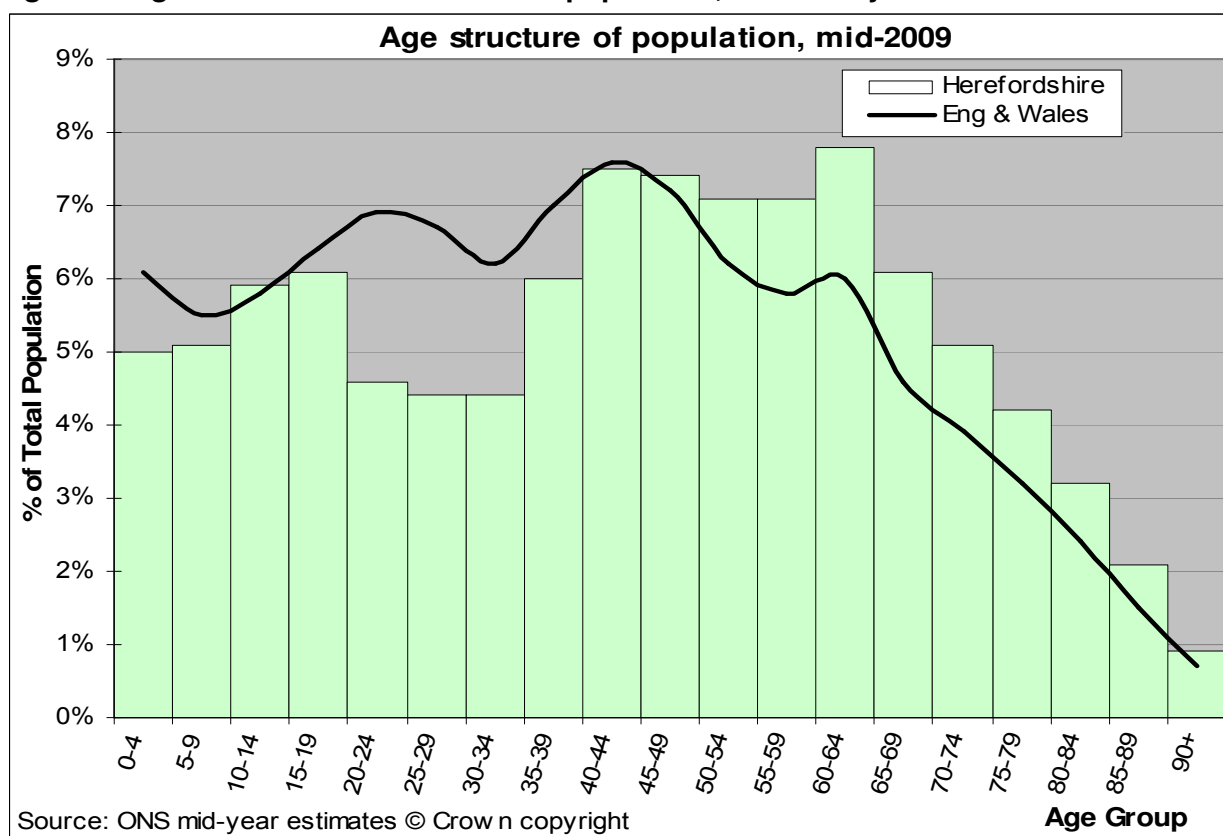
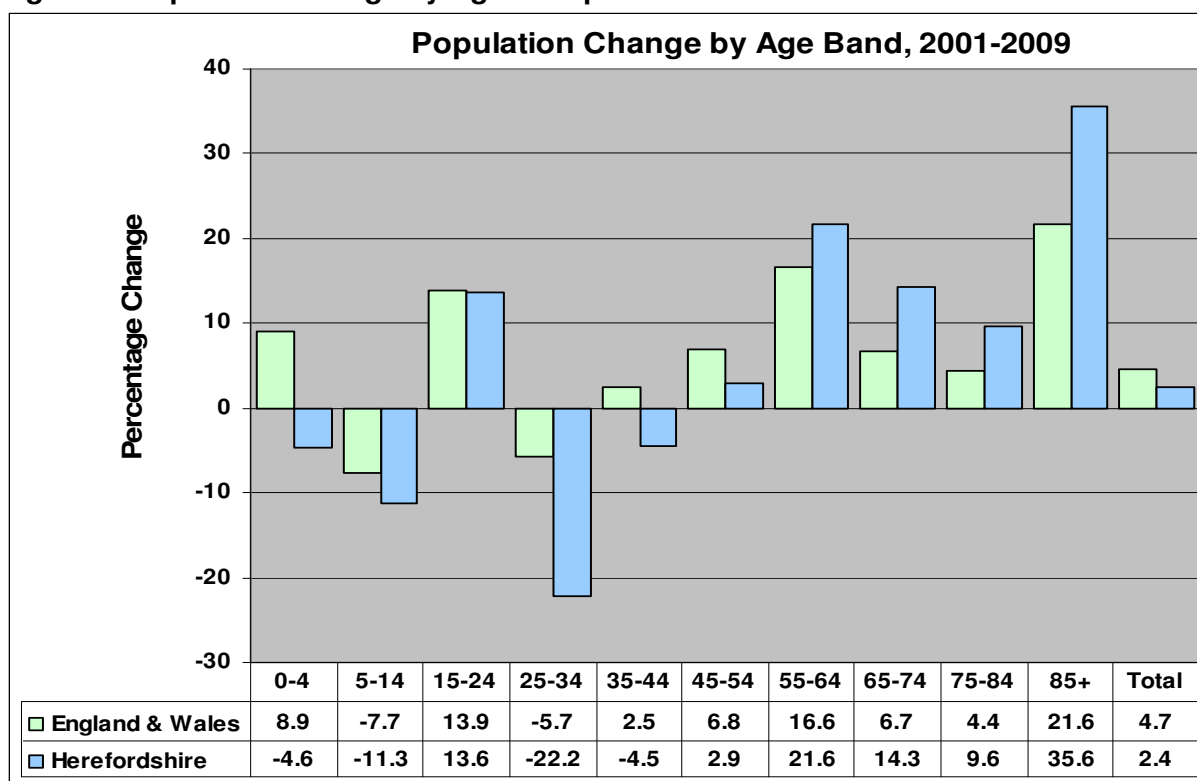


Figure 2: Population Change by Age Group in Herefordshire mid-2001 to mid-2009



Source: ONS mid-year estimates © Crown copyright.

Herefordshire's total population growth over the period 2001 to 2009 (2.4%) has been below the national rate (4.7%), but there are much larger differences evident within individual age-groups. Population change has mainly been in the same direction as the national trend with the exception of the 0-4 and 35-44 age bands, but often of a greater magnitude.

The number of under 5's fell by around 5% (400 children) in Herefordshire over the period, compared to an increase of almost 9% nationally. Numbers of people in the older age groups have grown much more rapidly in Herefordshire than in England and Wales as a whole. In 2009, there were 15% more people aged 65 and over living in the county than there were in 2001 (an increase of 5,100 people), in comparison with a near 8% increase nationally. The most notable increase locally was in those aged 85+ years (36%) – although relatively small numbers comprise this age group (5,400 in 2009).

FERTILITY AND BIRTH STATISTICS

Table 2: Birth rates

	Herefordshire	Comparator PCTs	WMR	E&W
Number of live births in 2009	1,824	-	71,042	705,995
% live births by maternal age in 2009:				
11-15	0.1	0.2	0.2	0.1
16-19	5.8	7.2	7.1	6.0
20-24	19.4	20.7	22.1	19.3
25-34	52.5	52.5	53.7	54.6
35-39	18.0	15.8	13.8	16.2
40+	4.2	3.7	3.2	3.8
Stillbirth rate 2007-2009 (per 1,000 total births)	3.5	4.6	5.6	5.1
95% CI	(2.2 – 5.5)	-	(5.3 – 5.9)	(5.0 – 5.2)
Percent of births 2009 (live & still) under 1500 grams	1.4	1.2	1.7	1.4
95% CI	(1.0 – 2.1)	-	(1.6 – 1.8)	(1.4 – 1.4)
Percent of births 2009 (live & still) under 2500 grams	6.8	6.7	8.5	7.5
95% CI	(5.7 – 8.0)	-	(8.3 – 8.8)	(7.4 – 7.5)
General fertility rate in 2009 (Live births per 1,000 women aged 15-44)	61.9	60.5	66.1	63.7

Table 3: Abortion rates: 2009

	Herefordshire		Comparator PCTs	WMR	E&W
	No.	Rate	Rate	Rate	Rate
Abortion rate per 1000 females (and number of abortions) by maternal age 2009					
<18 yrs	59	17.4	15.2	20.1	17.6
18-19	55	26.7	24.3	35.3	31.6
20-24	135	33.4	24.6	33.5	30.0
25-29	77	20.8	15.8	24.3	22.8
30-34	61	14.9	10.8	17.1	15.7
35+		5.6	4.4	6.9	6.6
Crude rate per 1000 female population (aged 15-44 years)	459	17.2	13.2	19.2	17.5
Percent of abortions by gestational age in 2009	No.	%	%	%	%
Gestation (weeks): 3-9	358	78.0	62.8	76.3	74.7
10-12	63	13.7	25.8	13.8	15.8
13+	38	8.3	11.4	9.9	9.4
Proportion of abortions carried out under NHS (directly or via agency) and privately in 2009	No.	%		%	%
NHS	438	95.4	-	97.0	93.9
Non-NHS	21	4.6	-	3.0	6.1

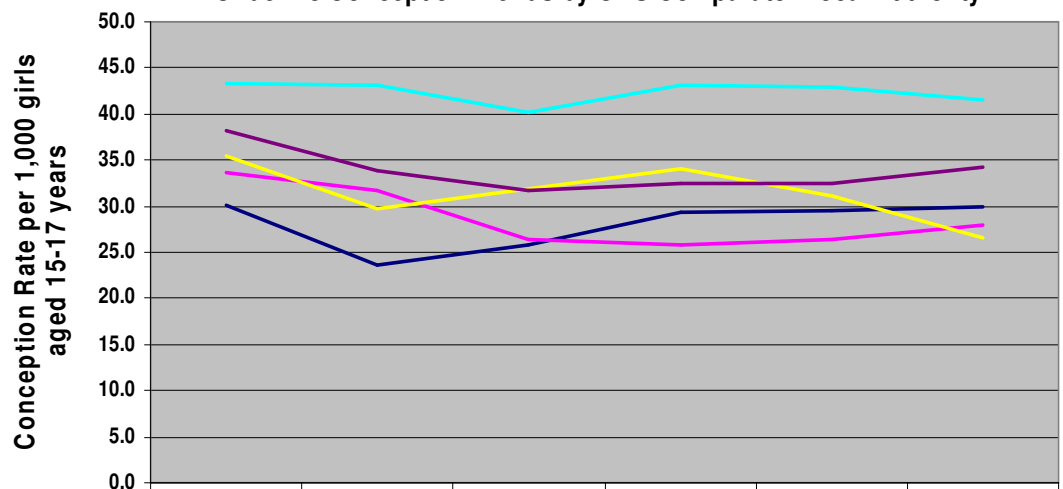
Table 4: Teenage conception rates: 2007-2009 pooled

	No. of conceptions 2007-2009	Rate (per 1000 girls aged 15-17)	% Leading to abortion
	346	34.2	52
Comparator Authorities*	-	31.5	48
West Midlands	14,356	45.3	49
E&W	122,572	40.3	49

*derived from the four most similar local authorities according to ONS Area classifications – Mid Devon, Mendip, North Shropshire and Kings Lynn & West Norfolk.

Source: ONS & DfE

Under-18 Conception Trends by ONS Comparator Local Authority



	1998-2000	2001-03	2004-06	2005-07	2006-08	2007-09
Mendip	30.1	23.6	25.7	29.2	29.5	29.9
Mid Devon	33.6	31.7	26.4	25.8	26.4	28.0
North Shropshire	35.4	29.7	32.0	34.1	31.1	26.5
Kings Lynn & West Norfolk	43.4	43.0	40.2	43.0	43.0	41.6
Herefordshire	38.2	33.9	31.7	32.5	32.4	34.2

MORTALITY

Table 5: Total death rates

		Herefordshire	Comparator PCTs	WMR	E&W
Directly age-standardised death rates (per 100,000 population) and observed number of deaths from all causes, 2007-2009 pooled					
Males	Rate (95% CI LL-UL)	624.63 (600.78 – 648.47)	633.25 -	707.16 (702.12 – 712.20)	676.76 (675.20 – 678.32)
	No. of deaths	2,787	-	-	-
Females	Rate (95% CI LL-UL)	436.65 (418.96 – 454.33)	460.91 -	491.76 (488.03 – 495.48)	480.34 (479.18 – 481.50)
	No. of deaths	3,045	-	-	-
Persons	Rate (95% CI LL-UL)	523.16 (508.63 – 537.70)	539.90 -	590.05 (586.99 – 593.10)	569.67 (568.72 – 570.62)
	No. of deaths	5,832	-	-	-

Death rates are adjusted to take account of the age structure of the population. The age-standardised death rates for Herefordshire (for males, females and persons) are all significantly lower than those of the West Midlands and England and Wales.

Table 6: Age standardised death rates for selected causes

Directly Standardised Rates (standardised to European Standard Population) Average annual age-standardised mortality rates per 100,000 population, 2007-2009 pooled					
		Herefordshire	Comparator PCTs	WMR	England
All circulatory diseases (ICD10 I00-I99) in persons under 75					
Males	Death rate per 100,000 per annum (95% CI LL-UL)	86.22 (76.44 – 95.99)	86.71 -	105.06 (102.90 – 107.22)	99.44 (98.75 – 100.13)
	No. of deaths	309	-	-	-
Females	Death rate per 100,000 per annum (95% CI LL-UL)	37.15 (30.69 – 43.61)	38.08 -	44.49 (43.13 – 45.85)	43.22 (42.79 – 43.66)
	No. of deaths	136	-	-	-
Persons	Death rate per 100,000 per annum (95% CI LL-UL)	60.98 (55.18 – 66.78)	61.77 -	74.02 (72.76 – 75.29)	70.49 (70.08 – 70.89)
	No. of deaths	445	-	-	-
All malignant neoplasms (ICD10 C00-C97) in persons under 75					
Males	Death rate per 100,000 per annum (95% CI LL-UL)	116.12 (104.68 – 127.56)	115.95 -	128.55 (126.17 – 130.92)	124.02 (123.25 – 124.79)
	No. of deaths	409	-	-	-
Females	Death rate per 100,000 per annum (95% CI LL-UL)	92.20 (81.88 – 102.52)	96.52 -	102.07 (99.97 – 104.17)	101.21 (100.53 – 101.89)
	No. of deaths	324	-	-	-
Persons	Death rate per 100,000 per annum (95% CI LL-UL)	103.76 (96.08 – 111.44)	105.96 -	114.78 (113.20 – 116.36)	112.07 (111.56 – 112.59)
	No. of deaths	733	-	-	-
Suicide, self inflicted injury & injury undetermined, all ages (ICD10 X60-X84, Y10-Y34 excl. Y33.9)					
Males	Death rate per 100,000 per annum (95% CI LL-UL)	12.27 (7.88 – 16.66)	12.17 -	12.00 (11.24 – 12.76)	12.18 (11.93 – 12.42)
	No. of deaths	33	-	-	-
Females	Death rate per 100,000 per annum (95% CI LL-UL)	4.19 (1.82 – 6.56)	3.95 -	3.46 (3.06 – 3.86)	3.63 (3.50 – 3.76)
	No. of deaths	15	-	-	-
Persons	Death rate per 100,000 per annum (95% CI LL-UL)	8.16 (5.68 – 10.64)	7.95 -	7.68 (7.25 – 8.11)	7.85 (7.71 – 7.98)
	No. of deaths	48	-	-	-

Accidents (ICD10 V01-X59), all ages					
Males	Death rate per 100,000 per annum (95% CI LL-UL)	37.85	22.00	23.96	21.23
		(30.32 – 45.38)	-	(22.93 – 24.98)	(20.91 – 21.54)
	No. of deaths	115	-	-	-
Females	Death rate per 100,000 per annum (95% CI LL-UL)	10.57	10.79	11.34	10.16
		(7.40 – 13.73)	-	(10.75 – 11.93)	(9.97 – 10.45)
	No. of deaths	64	-	-	-
Persons	Death rate per 100,000 per annum (95% CI LL-UL)	24.05	16.36	17.60	15.65
		(19.97 – 28.14)	-	(17.02 – 18.18)	(15.47 – 15.83)
	No. of deaths	179	-	-	-

These figures give the monitoring data for the “Our Healthier Nation” national targets. For this reason, figures for England are given as a comparison rather than for E&W. “Our Healthier Nation” is the national health strategy for England.

Mortality rates from circulatory diseases and from cancers in persons aged under 75 years in Herefordshire are significantly lower than equivalent national and regional rates.

Mortality rates from accidents in Herefordshire for males are still significantly higher than nationally and regionally.

Table 7: Total deaths in Herefordshire by selected causes: 2007-2009

	2007	2008	2009
All malignant neoplasms	555	522	502
Lung cancer	91	100	89
Malignant melanoma of skin	13	12	5
Other malignant neoplasm of skin	4	4	1
Breast cancer	38	39	37
Cervical cancer	4	3	3
Coronary heart disease	285	312	288
Stroke	221	242	256
Accidents	54	71	54
Land transport accidents	17	25	18
Suicide, self inflicted injury and injury undetermined	14	18	16
Suicide and self inflicted injury	13	17	11
All causes, aged 0-14	7	11	5
All causes, aged 15-64	271	285	279
All causes, aged 65-74	298	307	277
All causes, all ages	1,974	1,983	1,875

Table 8: SMRs for selected causes of death: 2007-2009 pooled

	Herefordshire PCT		Comparator PCTs	WMR		England
	SMR	95% CI	SMR	SMR	95% CI	SMR
All malignant neoplasms (ICD10 C00-C97)						
Males	93	86-99	96	103	102-105	100
Females	91	84-98	96	100	99-102	100
Persons	92	87-96	96	102	101-103	100
Lung cancer (ICD10 C33-C34)						
Males	74	63-86	88	102	100-105	100
Females	74	61-89	82	92	89-95	100
Persons	74	66-83	85	98	96-100	100
Malignant melanoma of skin (ICD10 C43)						
Males	122	68-202	115	97	86-108	100
Females	151	84-248	92	92	80-104	100
Persons	135	91-193	105	94	86-103	100
Other malignant neoplasm of skin (ICD10 C44)						
Males	205	83-423	124	100	79-124	100
Females	84	10-305	100	104	79-135	100
Persons	156	71-296	115	102	85-120	100
Breast cancer (female) (ICD10 C50)						
Females	88	73-106	101	103	100-107	100
Cervical cancer (ICD10 C53)						
Females	107	51-197	87	103	90-116	100
Coronary Heart Disease (ICD10 I20-I25)						
Males	94	86-102	95	101	99-102	100
Females	90	81-99	96	95	93-97	100
Persons	92	86-98	95	98	97-100	100
Stroke (ICD10 I60-I69)						
Males	110	96-124	101	110	107-113	100
Females	134	122-146	108	107	104-109	100
Persons	124	115-134	105	108	106-110	100
Accidents (ICD10 V01-X59)						
Males	163	134-195	98	115	110-119	100
Females	103	79-132	94	120	115-126	100
Persons	135	116-156	96	117	113-121	100
Land Transport accidents (ICD10 V01-V89)						
Males	289	215-380	135	121	112-131	100
Females	143	65-271	175	92	79-108	100
Persons	251	191-323	145	114	107-122	100
Suicide, self-inflicted injury & injury undetermined (ICD10 X60-X84, Y10-Y34, excl. Y33.9)						

Males	99	68-139	103	98	92-105	100
Females	136	76-225	105	95	85-106	100
Persons	108	80-144	104	97	92-103	100
Suicide & self-inflicted injury (ICD10 X60-X84)						
Males	106	70-155	104	101	94-108	100
Females	186	101-311	111	95	82-109	100
Persons	125	89-169	105	100	94-106	100
All causes (ages 0-14) (ICD10 A00-Y99)						
Males	52	26-94	97	129	122-138	100
Females	77	40-134	99	118	109-127	100
Persons	63	40-94	98	124	119-130	100
All causes (ages 15-64) (ICD10 A00-Y99)						
Males	94	86-102	90	107	105-108	100
Females	88	79-99	93	104	102-106	100
Persons	92	86-98	91	106	104-107	100
All causes (ages 65-74) (ICD10 A00-Y99)						
Males	87	80-94	89	105	103-106	100
Females	83	75-93	90	103	101-105	100
Persons	85	80-91	89	104	103-105	100
All causes (all ages) (ICD10 A00-Y99)						
Males	93	89-96	95	105	104-105	100
Females	93	90-97	97	102	101-103	100
Persons	93	91-96	96	103	103-104	100

Generally (considering both sexes together), mortality rates are significantly lower in Herefordshire than both nationally and regionally for all cancers, for lung cancer specifically, for coronary heart disease, and for all causes of death across all ages.

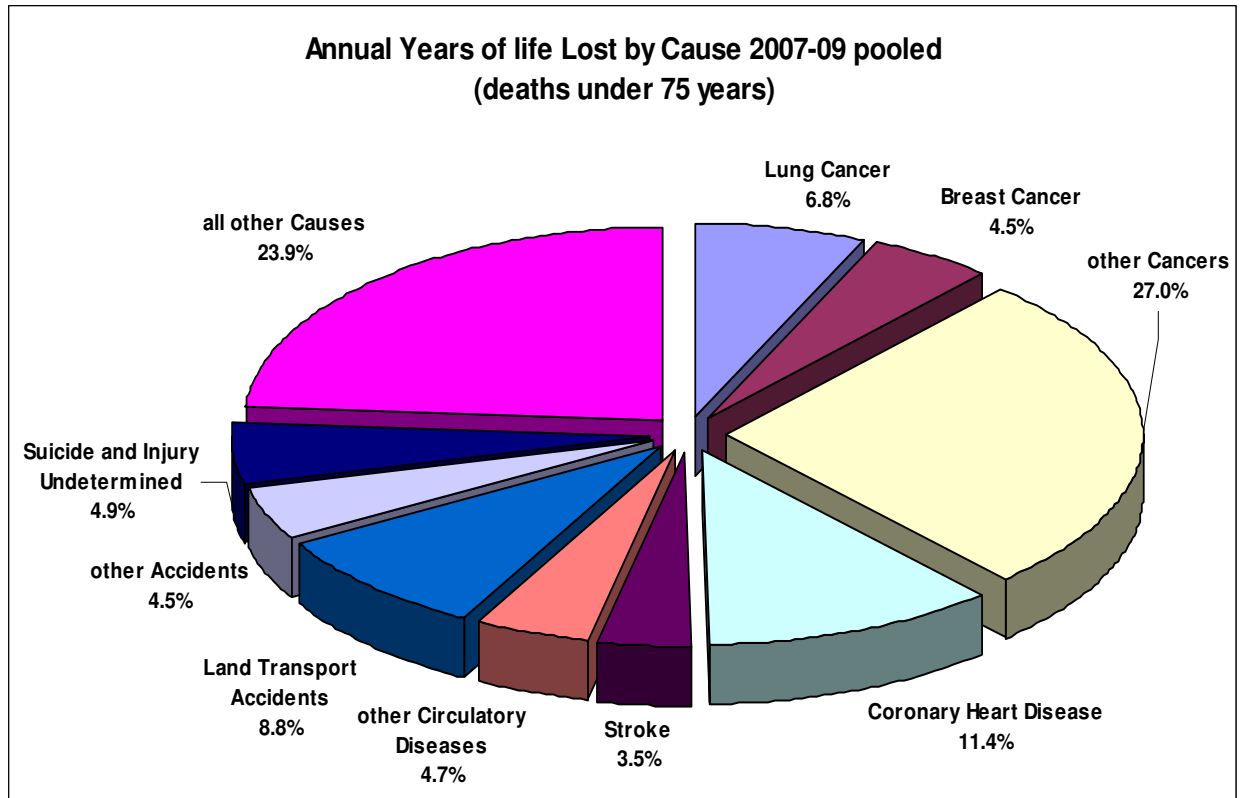
Rates are significantly higher in Herefordshire than nationally for strokes and accidents (including land transport accidents).

Table 9: Years of life lost by selected causes of death

Years of life lost up to age 75 (YLL), and directly standardised average annual YLL rates per 10,000 European Standard population aged under 75 (SYLL rate), 2007-2009 pooled						
	Herefordshire PCT		Comparator PCTs	WMR	E&W	
	YLL	% of total YLL	SYLL rate	SYLL rate	SYLL rate	SYLL rate
All causes (ICD10 A00-Y99)	22272	100	412.98	413.81	459.84	435.73
All malignant neoplasms (ICD10 C00-C97)	8524	38.3	144.33	140.76	151.09	146.76
Lung cancer (ICD10 C33-C34)	1504	6.8	24.48	24.12	28.73	28.43
All circulatory diseases (ICD10 I00-I99)	4364	19.6	73.92	76.57	92.76	88.61
Stroke (ICD10 I60-I69)	770	3.5	12.80	13.26	16.84	15.68
Coronary heart disease (ICD10 I20-I25)	2542	11.4	41.10	39.77	51.02	47.43
Accidents (ICD10 V01-X59)	2973	13.3	70.73	46.44	38.00	37.31
Land transport accidents (ICD10 V01-V89)	1966	8.8	48.94	29.52	19.28	16.78
Suicide and injury undetermined (ICD10 X60-X84, Y10-Y34 excl. Y33.9)	1097	4.9	24.80	25.52	25.27	25.71

Looking at mortality data in this way gives more weight to deaths that occur at younger ages.

Figure 1 Annual years of life lost by cause 2007-09



Infant and Childhood Mortality Rates

Table 10: Perinatal mortality rate

(Stillbirths and deaths under 7 days per 1000 total births 2007-2009 pooled)

	No. deaths	Rate	95% CI
Herefordshire	29	5.4	3.7 – 7.7
Comparator PCTs	-	6.7	-
West Midlands	-	9.2	8.8 – 9.6
E&W	-	7.6	7.5 – 7.7

Table 11: Number of infant deaths and mortality rates in infancy

(per 1000 live births 2007-2009 pooled)

	Aged under 1 year (Infant mortality rate)			Aged under 28 days (Neonatal mortality rate)			Aged under 7 days (Early neonatal mortality rate)		
	No.	Rate	95% CI	No.	Rate	95% CI	No.	Rate	95% CI
Herefordshire	17	3.2	2.0 – 5.1	11	2.0	1.1 – 3.7	10	1.9	1.0 – 3.4
Comparator PCTs	-	4.5	-	-	3.1	-	-	2.2	-
WMR	-	6.2	5.8 – 6.5	-	4.5	4.2 – 4.8	-	3.6	3.4 – 3.9
E&W	-	4.7	4.6 – 4.8	-	3.2	3.1 – 3.3	-	2.5	2.4 – 2.5

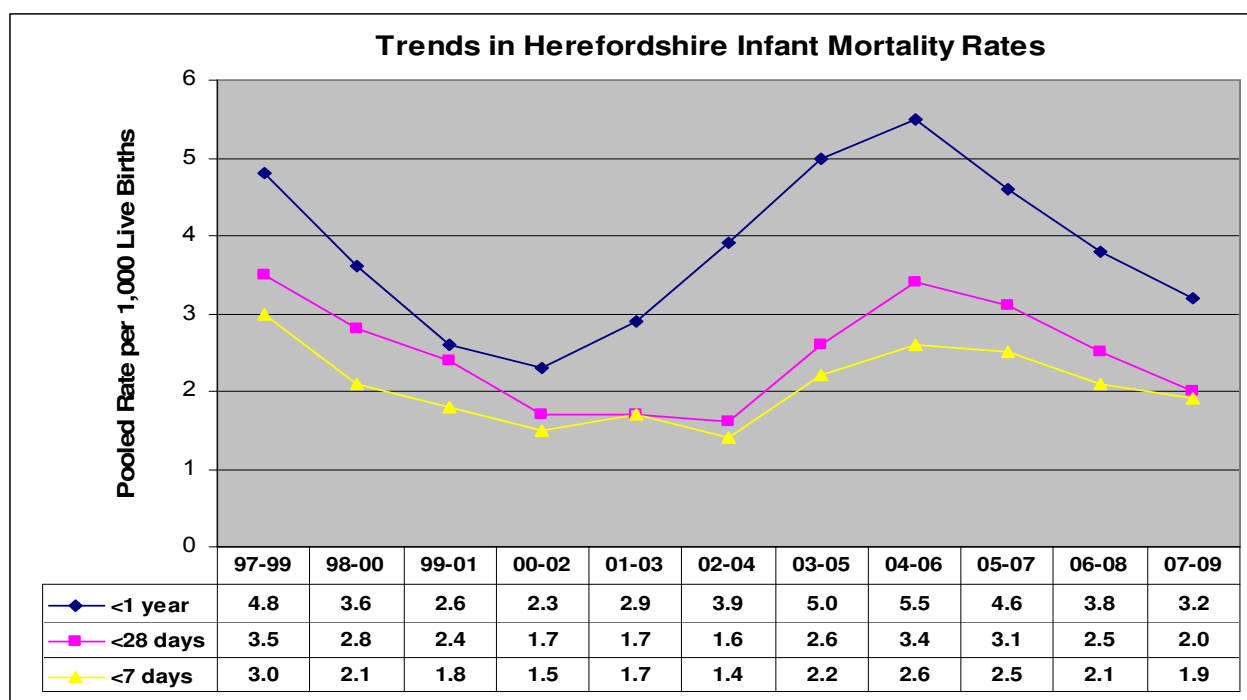
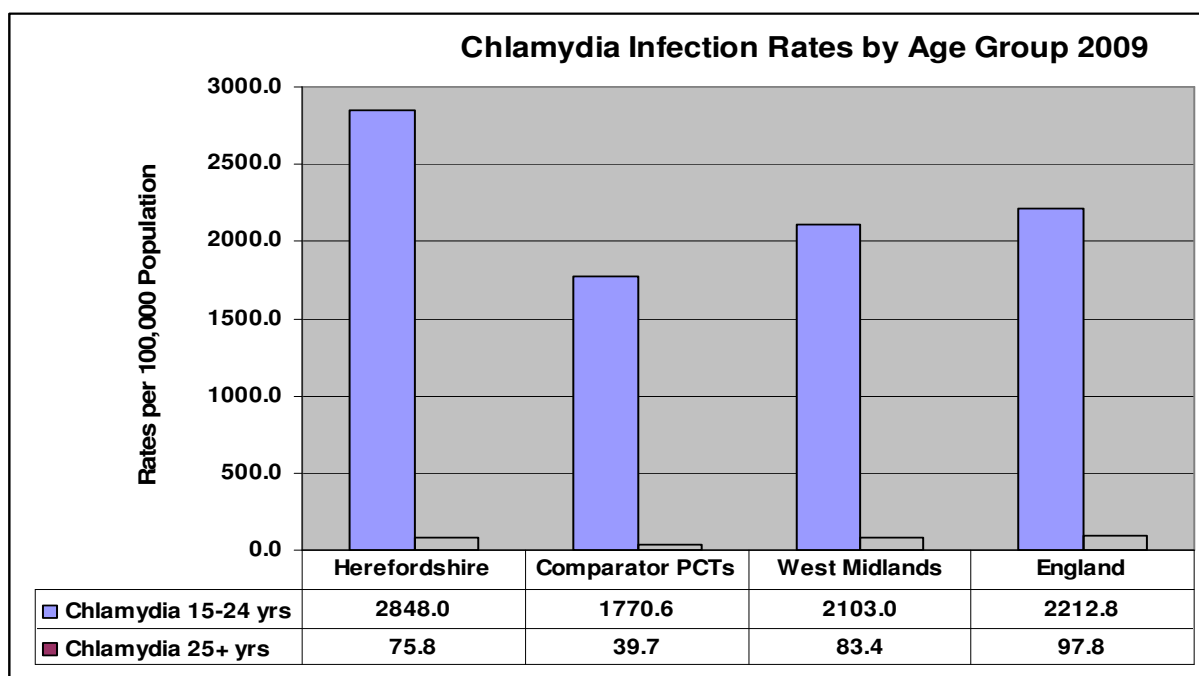
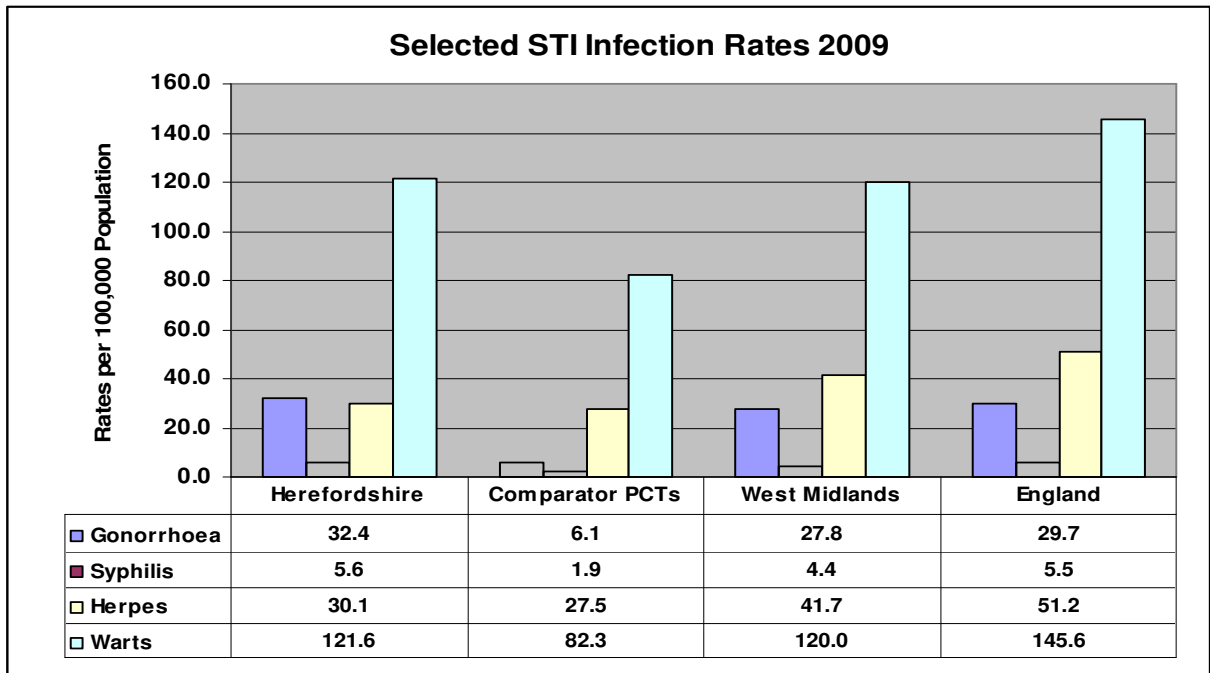


Table 12: Number of child deaths and mortality rates in childhood (per 100,000 population 2007-2009 pooled)

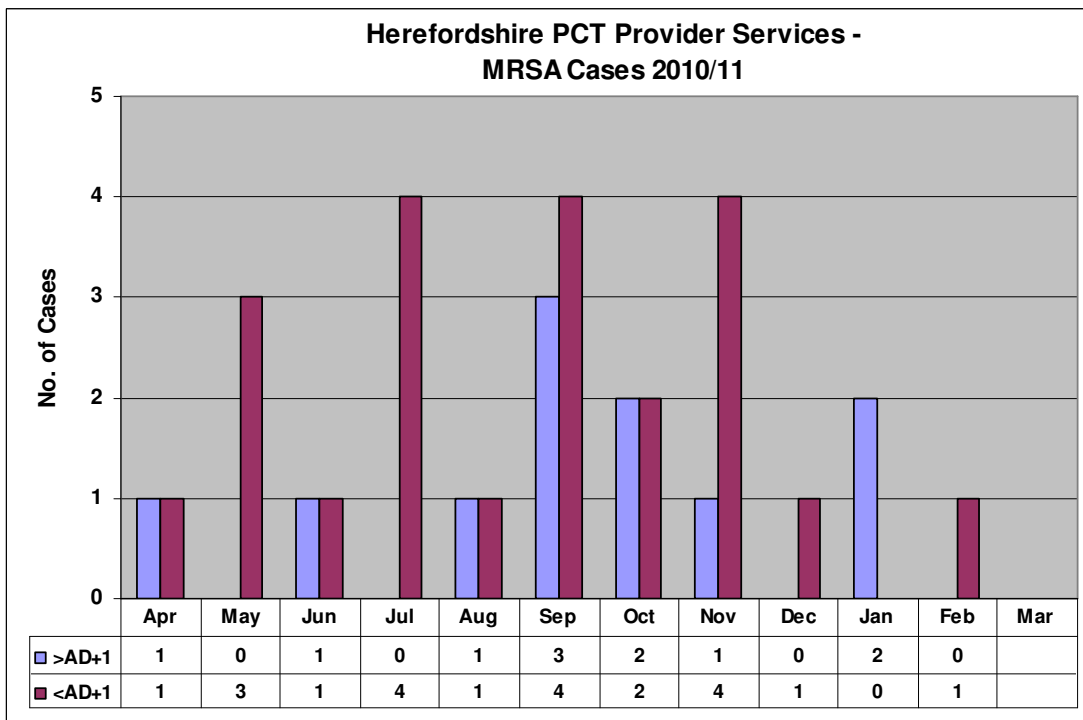
	1-4 years		5-14 years	
	No.	Rate	No.	Rate
Herefordshire	1	18.8	0	3.3
Comparator PCTs	-	20.4	-	11.8
West Midlands	-	22.6	-	10.8
E&W	-	20.2	-	10.5

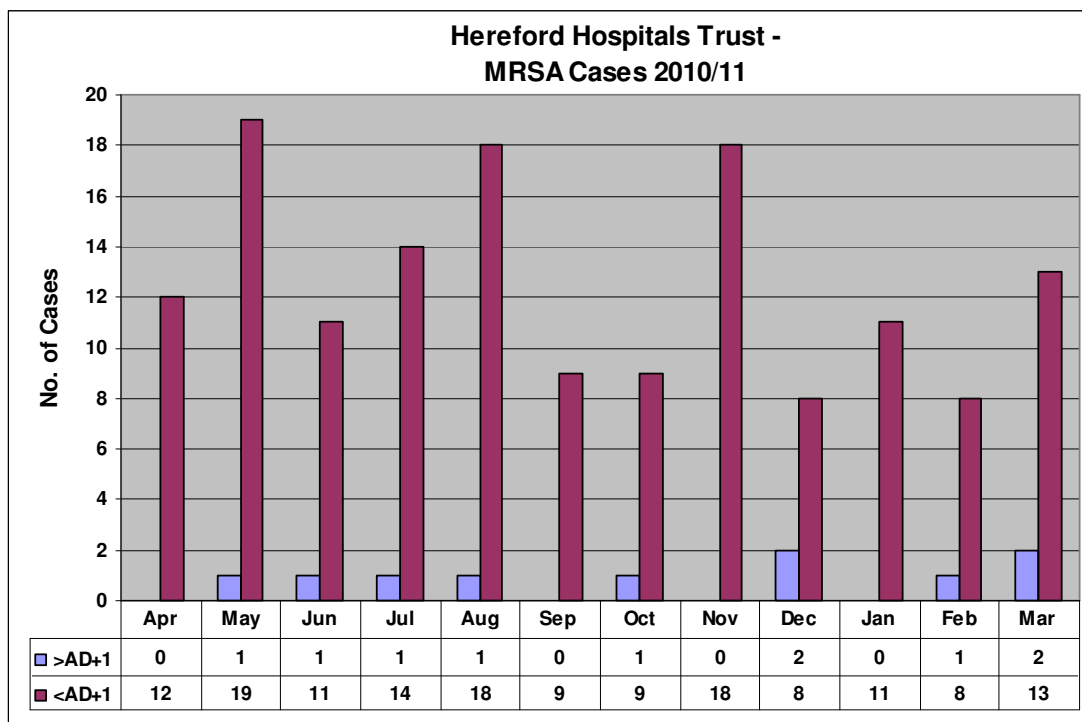
All these calculated rates for Herefordshire are based on relatively small and fluctuating numbers of events, and accordingly the confidence intervals around the rates can be wide.



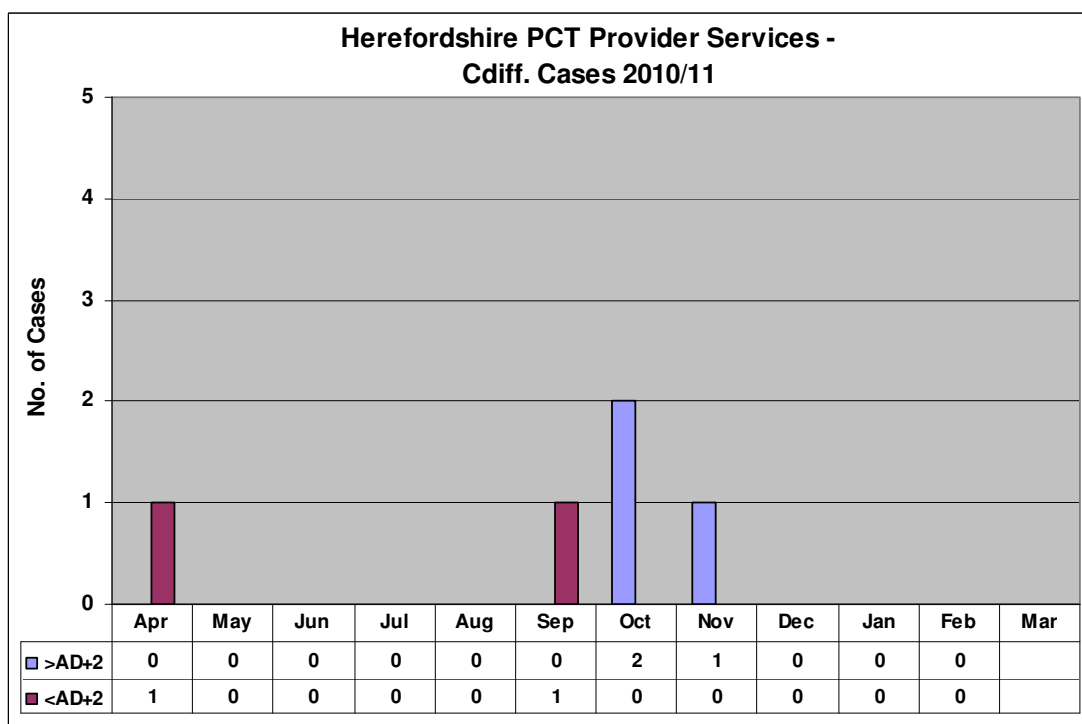


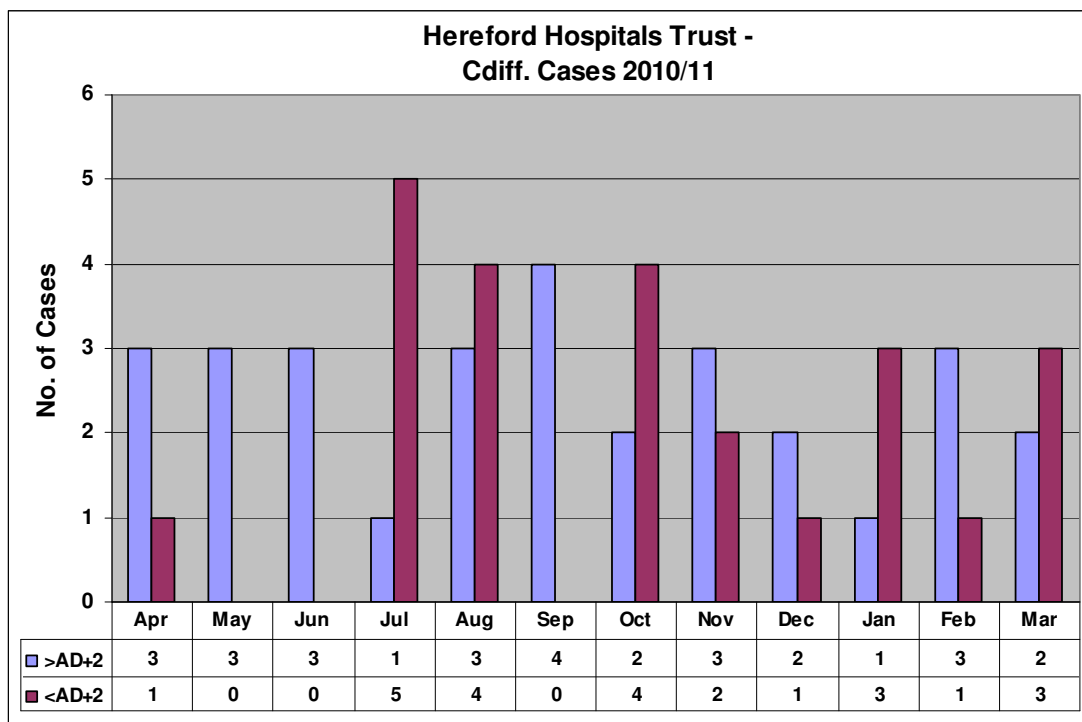
Source: Health Protection Agency, Centre for Infections





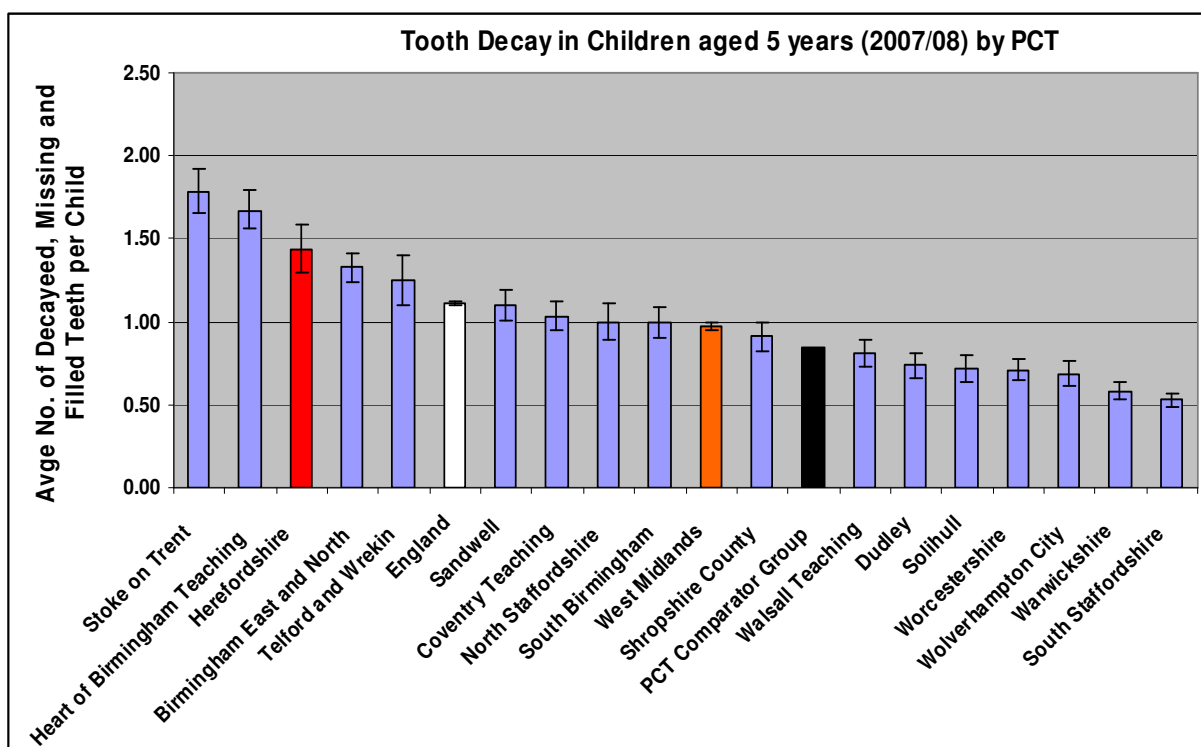
MRSA will now be reported as pre or post day of admission plus 1 day (<AD+1 or >AD+1) rather than pre or post 48 hrs. This is to standardise the definitions used to apportion cases in line with national reporting systems. MRSA will be apportioned to a hospital when the specimen date is on or after the third day of admission where the day of admission is day 1. This definition has been applied to all new cases of MRSA identified this financial year.





The term pre and post 48 hrs will no longer be used when describing acquisition of *C. difficile*. It will now be reported as pre and post day of admission plus 2 days (AD+2). *C. difficile* infections will be apportioned to a hospital where the specimen date is on, or after the fourth day of the admission, where the day of admission is day 1.

Source: HHT/PCT Infection Protection and Control



Source: NHS Dental Epidemiology Programme for England

Highest sample rate in the Region (83.6%); one of the highest in the country (England average 66.8%). Third highest rate of decay in the West Midlands (1.44 teeth per child) compared to West Midlands average of 0.97 teeth and England (1.11). Comparator group of most similar PCT's recorded just 0.84 dmf teeth per child.